

Ayatullāh al-‘Uzma Makārim Shīrāzī

Some Important Points About

Moon

Sighting



# Some Important Points About Moon Sighting

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## Preamble

A group of brothers in faith, who are students of religion, requested me to explain my views about moon sighting and briefly mention the evidence for my position. This small booklet is written under these special conditions in response to their request and in order to fulfill my responsibility.

We will first discuss the general subject of moon sighting and then the issues of sighting the moon with telescopes and ‘unity of horizon’ (*ittihād al-ufuq*) will be discussed. However, before all this, we wish to mention one issue which may be considered most important of all and that is the regrettable discord that has been seen in the recent years with regards to sighting the moon of Shawwāl, and which has turned the sweet honey of ‘Eid into something bitter for everyone.

Today we find a group reciting the ‘Eid prayers on one day, saying:

أَسْأَلُكَ فِي هَذَا الْيَوْمِ الَّذِي جَعَلْتَهُ لِلْمُسْلِمِينَ عِيدًا

*I ask you by this day which you have made an ‘Eid for all Muslims... and the very next day we see another group, in the same city and sometimes in the same mosque, reciting*

the same thing, and one cannot tell what the words “all Muslims” means here. Some were congratulating each other on ‘Eid and others were fasting and reciting the supplication:

يَا عَلِيُّ يَا عَظِيمُ... وَ هَذَا شَهْرٌ عَظِيمٌ وَ كَرِيمٌ... وَ هُوَ شَهْرُ رَمَضَانَ

*O High, O Mighty... This is a month which You have exalted, honored... and it is the month of Ramadān... and sometimes at the very same moment or even in one home, these differences can be seen; despite the fact that Islam is a religion of unity (*tawhīd*) in every aspect and we shall see how, even with different juridical edicts (*fatāwā*), there is no cause for difference or discord.*

People are afraid that this trend will continue in future years and as a result, some ignorant individuals have even begun questioning the teachings of Islam. This matter becomes even more serious when we find that the issue of moon sighting has been resolved in most Muslim countries, and at least all the residents of one country are in agreement with one another [about the day of ‘Eid]; but what can we say about our own country? We may be the only ones who haven’t solved this problem, despite having many learned jurists.

The real problem lies in our considering the matter of moon sighting, which is from the applicative and subjective issues (*mawdū‘āt*), as a legal issue to be dealt with by jurists as one of the laws of the *sharī‘a*. We know that with regards to legal rulings, people either have to be

*mujtahids* themselves or follow others who are *mujtahids*. However, in subjective matters, each person is allowed to act on his own conviction and certitude.

To elaborate further, fasting in the month of Ramadān is one of the necessary tenets of Islam and is clearly prescribed in the Qur'ān; nobody doubts this. Because its being obligatory is a necessary part of faith, emulation (*taqlīd*) naturally has no place in it. However, with regards to learning the rules, conditions and stipulations of fasting, one must either be a *mujtahid* himself or follow one of the learned *mujtahids*.

Nevertheless, the question of whether today is the first of the holy month of Ramadān or not is one of the issues that each individual needs to ascertain for himself, meaning that whenever a person attains certainty that it is the first day of the month of Ramadān, he can fast and when he becomes sure that it is 'Eid day, he can end his fasting.

However, because of their deep trust in the *marāji'*, people refer to them about these important issues as well, so that they can better understand what to do. Still, according to the *shari'a*, the *marāji'* are not bound to answer queries about specific cases and may just as well say that each individual has a responsibility to carry out his own investigation and act upon its outcome.

On the other hand, if everyone were to individually carry out his or her own investigation on this matter, which concerns the entire community, many differences will undoubtedly come about due to the varying sources that

are consulted, and this is not congruous with the spirit of Islam. Referring to different *marāji‘* individually would also result in a similar problem, because it is possible that a number of people may bear witness, in the presence of one *marja‘*, that they sighted the moon, whereas another group may give different testimony to another *marja‘*; or the people who give testimony to one *marja‘* may not be considered reliable by another. Furthermore, it is possible that the witnesses who present themselves to one *marja‘* might not even be able to visit another *marja‘*.

All these are factors that can lead one individual to attain certitude about the moon being sighted while another may still be uncertain. The outcome is a serious and worrying discord among the people which undermines the greatness of ‘Eid and the blessed month, along with its sacraments, and may affect not only one city, but even one home.

### **Moon Sighting Committee**

There is a clear course of action that can bring an end to these differences and, at the very least, allow the residents of one country to follow a singular path, thereby preserving the greatness and sanctity of these Islamic precepts. This is the formation of a moon sighting committee, made up of experts in the field [of astronomy] as well as representatives of the *marāji‘*, that will be responsible for collating all the information that arrives from different sources about sighting of the moon, including reports from eyewitnesses and astronomers,

whose opinions may be taken as corroborative to the incoming [witness] reports, before reaching a unanimous decision that would be announced [to the people].

It may be asked: What would we do if the members of such a committee do not come to an agreement regarding the moon sighting (either because they disagree on the reliability of witnesses or for other reasons)? The answer to this is that the opinion of the majority can be the yardstick, because this will satisfy most of the people and bring one ‘closest to certitude’. As mentioned earlier, the matter is about establishing a specific instance, not formulating the general ruling and as such, it will cause no problem.

Another question that may be asked is: What is to be done when, at times, the *marāji‘* themselves differ in their rulings about moon sighting? We believe that this too does not pose a problem and we have already found a solution for this, the exposition of which is beyond the scope of this short paper. In any case, it is permissible to accept and rely upon the opinion of the moon sighting committee which results from [their] rigorous analysis and scrutiny.

Certainly, the Master of the Age (may our souls be ransomed for him) is not pleased that his followers should get embroiled in discord and disagreement on such a matter, to the point that in one city or even in one home there is discordance, for this will weaken their might and cause them to face defeat at the hands of their enemies. When the Imāms of the Ahl al-Bayt (‘a) give permission to their followers to participate in the congregational prayers

of the Ahl al-Sunna, in order to preserve unity, despite the numerous differences in the method of prayer, how can they be pleased if the question of moon sighting leads to so much discord? That too in this day and age, where news travels instantaneously from one part of the world to the other.

It is quite astonishing that, because we lack one central moon sighting committee and continue to rely on the reports of sighting by lay witnesses, it has been many years that people fast for only 29 days in the month of Ramaḍān and few can remember the last time that the fasting continued for 30 days (except in some rare cases). This, as far as science is concerned, is not possible and we do not know who is to be held responsible. We hope that those who are in charge will look into the matter of a moon sighting committee and pave the way for its establishment.

### **Is it sufficient to sight the moon by telescope?**

The majority of *marāji'* opine that the moon must be seen by the naked eye, but some contemporary scholars deem it sufficient to sight the moon using a telescope. After a thorough analysis of the evidence, it is apparent that – with deference to all the opinions of the scholars – this view is not tenable given the evidence and is not conformant with juristic principles because:

**Firstly**, in successive (*mutawātir*) narrations about ascertaining the beginning of a new month, sighting of the

moon has been mentioned, such as those that have been recorded in the chapters related to the month of Ramadān in *Wasā'il al-Shī'a*, where 28 traditions have been narrated which mostly have the following statement:

إِذَا رَأَيْتَ الْهِلَالَ فَصُمْ وَإِذَا رَأَيْتَ الْهِلَالَ فَأَفْطِرْ

*When you see the moon then fast, and when you see it [again] then stop fasting.*

Or

صُمْ لِلرُّؤْيَةِ وَأَفْطِرْ لِلرُّؤْيَةِ

*Fast upon sighting [the moon] and stop fasting upon sighting [the moon].*

In the succeeding chapters too, similar traditions can be found. When the word 'sighting' is used, it generally means the 'sighting' that is commonly understood by people i.e. seeing with the naked eye and without any optical aid; because in all jurisprudential matters, the jurists take general statements to mean that which is commonly understood, for example:

- 1) In the chapter on ablution (*wuḍū'*), they say that the extent of one's face that should be washed is what is between where the hair starts growing and the chin (vertically) and the area covered between the middle finger and the thumb, horizontally. Then the jurists say that the gauge is the average length of fingers and the normal place

where the hair begins to grow etc. and those whose features are not average should follow the measurements of average people.

- 2) In the chapter of the quantity of *kurr* [water] which is usually measured by a specific number of handbreadths (*wajab*), average handbreadths are used as reference and those that are not of average size are not taken as a gauge.
- 3) In the matters where distance is measured in steps, it is the length of an average step which is used.
- 4) For the fasting and prayers that are performed in the areas near the north and south poles where the days or nights are much shorter than average, many jurists have said that the timings of the nearest locations with close to average days should be used.
- 5) In the matter of *hadd al-tarakhkhush* (the last point from where the wall of the city can be seen and the call to prayer heard) they say that it is the person with average eyesight (neither too strong nor too weak) and average hearing, along with average amplitude of sound [for the *adhān*] that is to be considered and nothing more or less than this.<sup>1</sup> All the great contemporary scholars are in complete agreement regarding this.
- 6) As to the forbidden acts that are punishable by flogging, they say that the lashes should be of the

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<sup>1</sup> Refer to ruling no. 67 out of the rulings pertaining to the prayer of a traveler in *al-'Urwat al-Wuthqā*.

average intensity, neither with too much force nor with too little such that it is rendered ineffectual.

- 7) In the chapters about impurity (*najāsa*) they say that if the actual impurity (like blood for example) has apparently disappeared but its color or smell remains, it is pure. Now if a person were to use a microscope, he would most definitely see some remains of blood (because color and smell are its inseparable parts), but because this type of seeing is outside the domain of common perception, it is not considered in the ruling.
- 8) Whenever an impure substance (like blood) gets dissolved in *kurr* water, everyone says that it is pure, yet with a microscope one can still see the particles of this substance in the water.

Aside from these eight cases, there are many other examples that can be found in the different chapters of jurisprudence wherein the words of the Lawgiver and the expression of the verse or tradition is of general purport and thus the jurists have taken the meaning to be 'that which is commonly understood'. Indeed, in the case of moon sighting what has come in the successive traditions also pertains to the common understanding of 'sighting' i.e. seeing with the naked eye, and using optical aids or telescopes definitely falls outside the purview of the common understanding of this term. It is not conceivable that we refer all general statements to what is commonly understood in every legal matter except in the case of moon sighting.

**Secondly**, some have said that the criterion for the start of a new month is ‘the actual birth of the new moon’ and sighting is only one way to ascertain this, not the only way. Therefore, if we come to learn about the birth of a new moon even through unconventional or uncommon means, it is sufficient.

Our answer to this is that the apparent meaning of the traditions most certainly specify sighting of the moon with one’s eyes as the way to establish the beginning of a new month. This is because, if the criterion was the actual birth of the moon, an important problem comes about which cannot be easily resolved, namely that the birth of the new moon usually occurs before the possibility of sighting the moon with the naked eye. In other words, in many instances the moon emerges in the sky but nobody can see it with the naked eye until the next night.

Therefore, we must accept that most of the time the moon is born one night earlier but because people cannot sight it, they take the second night of the lunar month to be the first night. It is true that they are excusable for not having seen or known about this, but is it possible that all the Muslims, from the time of the Prophet (s) until the present, constantly mistook the second of the lunar month for the first and were thus deprived of the merits of the Nights of Qadr and ended up fasting on the actual day of ‘Eid only to offer the ‘Eid prayers on the next day because they did not possess telescopes?

Even those who consider sighting the moon with telescopes to be sufficient must acknowledge that in many

of the previous years, they themselves, along with their followers, started the month of Ramaḍān on the second day and took the second of Shawwāl as the first, because they did not use the telescope [at that time], and had they done so they would have realized that the first of the month was one day earlier and the Nights of Qadr were also not marked on their correct dates and hence their benefits were lost.

All this is testament to the fact that the actual birth of the moon is not the criterion, rather the criterion is the ability to see the moon with the naked eye. As a rule, in the science of jurisprudence we say that signs (*amārāt*) and outlined legal methods (*turuq*) cannot be frequently wrong, because this would deprive the people of recognition of reality. In cases where signs are frequently wrong, we must say that they lack specificity and are subjective. It is not conceivable that in the past, even during the time of the Prophet (s) and the infallible Imāms ('a), people were unable to discern the day of 'Eid and were deprived of the [benefits of the] Nights of Qadr. On the contrary, we believe that it is the use of telescopes to determine the beginning and end of months that deprives the people [of this] because the correct criterion is sighting with the naked eye.

It is possible some may surmise that by using optical aids we will rid ourselves of all these differences [related to moon sighting], but this has no such effect because the strength of telescopes vary and the areas where they are installed differ in terms of dust and mist in the horizon.

Therefore it is quite possible for some people to sight the moon with their telescopes while others cannot and hence they deny that the moon was sighted and once again, differences and disagreements arise.

### **Is Unity of Horizon a condition?**

When the moon is sighted in one part of the world, is this sufficient for all the other areas? The majority of Shi'a jurists say that unity of horizon (*ittihād al-ufuq*) is a requirement. The late Muhaqqiq Yazdī discusses this in *al-Urwah* and states that 'proximity of areas' or 'unity of horizon' is a condition, and most of the scholars who have appended their annotations to this text agree with him.

However, there are some erstwhile and contemporary scholars who do not consider this to be a condition and opine that sighting the moon in one part of the world is sufficient for all other areas (as long as they share part of the night). The pioneer of this edict during our time was the late Ayatullāh al-‘Uzmā Sayyid al-Khū’ī (may Allāh have mercy upon him). Later a group of his students followed him in this and gave the same opinion. The main evidence that they have for this opinion comes down to the following two points:

1. The rising of the moon and its birth is a cosmic event which is related to the sun facing the moon. Whenever that side of the moon which is always facing us [also known as the 'near side'] emerges out of darkness and

partially faces the sun, the new [lunar] month begins and this is unrelated to the different areas of the earth as this is a cosmic event, not an earthly one.

In the notes of Ayatullāh al-Khū'ī's lessons we read:

The birth of the crescent comes about when it emerges from its alignment with the sun to the extent that it becomes possible to sight, albeit partially. This is a singular event that does not differ from place to place or area to area because as we know, it is the result of the relationship between the moon and the sun and not between it and the earth. Therefore there is no effect of the difference of [earthly] location on the occurrence of this apparent cosmic event in space.<sup>2</sup>

However, this explanation is concordant with the flat earth theory and not with the spherical nature of the earth that has been established. If in the past it was necessary to prove the spherical nature of the earth, today satellites take pictures of the entire earth and relay it to us and astronauts have also seen that the earth is indeed a sphere so it is now [considered to be] something obvious.

Put differently, the birth of the moon is related to three things: the moon, the sun and the earth; because the moon is born when a thin line from the illuminated part of the moon is visible by people on earth. Indeed, this illuminated portion can be seen quicker by those

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<sup>2</sup> Al-Burujerdī, *al-Mustanad fī Sharḥ al-‘Urwat al-Wuthqā*, vol. 12, p. 118

on earth who are in its line of sight. This can be shown through an experiment. If we take three spheres, one of which is luminous, like a bright lamp, while others are non-luminous, we will see clearly that if the first dark sphere is placed in front of the luminous sphere such that only a thin line of light points towards the third sphere, those people who are in the line of sight will be able to see that thin line of light whereas those who are not in the line of sight will not be able to see it. What we learn from such an experiment is evident and requires no further explanation. Yes, if the earth was flat, the above claim would have been plausible; but the earth is most surely not flat.

Another objection that can be raised against this claim is that they say that all the areas that share part of the night have the same beginning of the lunar month. This means that if, when the sun sets, the new crescent is seen in Makkah for example, in the areas to the east where part or half or even most of the night has already passed, the month changes – because up to that point they were still in the last night of the month of Ramaḍān as the new moon had not yet been born. They were reciting the supplications for the last night of the holy month. Suddenly, from midnight, it becomes the first night of Shawwāl [for them], because when the sun sets in Makkah, at that moment the moon is born!

This matter is bewildering and unacceptable, because before that moment (when the sun set in Makkah in

our example), it is evident that the moon had not yet emerged from the ‘new moon’ phase and when it did, the new month started. This means that for some places, the first of Shawwāl starts from the middle or even the last part of the night whereas the main part of their night is considered the last night of the month of Ramaḍān. If it is said that from the beginning of the night it was the first of Shawwāl for all these places, this is not acceptable because as long as the new crescent does not emerge, the new month has not begun and hence Shawwāl has most certainly not started.

After the crescent emerges and becomes visible, it is the first of the month for all these areas, so in reality [for some places] half the night is the last night of Ramaḍān and the other half is [the first of] Shawwāl. Obviously then, for the far off areas where the night is not shared (like Canada and America), the first of the month will be one day after it. (Think about this).

2. The second proof given by those who claim that there is no difference in the horizons is the general purport of traditions, especially the authentic narration of Hishām ibn Ḥakam which states that if the moon is seen in one area it is sufficient for all other areas. The tradition is as follows:

هِشَامُ بْنُ الْحَكَمِ عَنْ أَبِي عَبْدِ اللَّهِ عَلَيْهِ الْكَوْنَى قَالَ: فِيمَنْ صَامَ تِسْعَةَ وَعِشْرِينَ قَالَ إِنْ كَانَتْ لَهُ بَيْتَهُ عَادِلَةً عَلَى أَهْلِ مِصْرٍ أَنَّهُمْ صَامُوا ثَلَاثَيْنَ عَلَى رُؤْيَاةِ قَضَى يَوْمًا

Hishām ibn Ḥakam [narrated] from Abī ‘Abdillāh (‘a) that he said about the one who fasted for twenty-nine days: “If he acquires just testimony that the people of a [certain] city fasted for thirty days based on sighting [of the moon], he will have to make up one day [of fasting].”<sup>3</sup>

They believe that since this tradition is general, it shows that if the moon is seen in any city of the world, it is sufficient for other cities, no matter how far they are. And this is the case with other similar traditions as well.

Our reply: The conclusion they have drawn is debatable, because this tradition is about those cities whence it was possible to convey the information [about the moon sighting] at that time, not the cities which were so far away that very little news, if any, would come from them. In other words, these traditions are specifically about cities that were close by in terms of horizon, such that it would take, in those days, a week or a month for one to travel from one to the other. However, the cities that do not share a horizon and which were so distant that it could take months to travel to them in those days, are not intended [in the tradition]. This is because it is highly unlikely for someone to think about and investigate the news of moon sighting in the month of Ramaḍān after many months have passed.

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<sup>3</sup> al-Ṭūsī, *Tahdhīb al-Āḥkām*, vol. 4, p. 158, ḥadīth no. 15

If we have even the slightest doubt about the general purport of this tradition, it would be the same as negating its generality (as discussed in the principles of jurisprudence). Therefore, these kinds of traditions prove nothing more than the probative value of witnesses who sight the moon in nearby cities that share the same horizon.

It is interesting that some of the early scholars used the argument of the necessity of having a single blessed Night of Qadr wherein divine decrees are established. However, these very same scholars only accept the same first of the month in places that share a night with the area where the moon is sighted. This means that for other places in the world where it is daytime when the moon is sighted (like Canada, North and South America etc.) they have to admit that there is a different Night of Qadr and there is a difference of one day for the start of the month in these places. What is even more interesting is the view of some scholars who say that the location of Muslim countries is such that they all share part of a night. This is despite the fact that millions of Muslims reside in countries that are far away. Additionally, we believe that Islam and its laws will eventually spread throughout the world. What will the Muslims do when this happens?

In summary therefore, just as the majority of scholars have agreed and the evidence shows, unity of horizon is a condition for sighting the moon. This is a result of the spherical nature of the earth – which is the same

reason for different prayer timings and times of sunrise and sunset [in different places]. If the goal is to maintain unity between Muslims, then due to the spherical nature of the earth, it is only possible to keep the Muslims of a particular area united - not everywhere in the world; because the Muslims who live on the other side of the earth have a different 'Eid, even according to those who say that unity of horizon is not a condition.

This matter requires much lengthier discussions in order to explicate the issue more thoroughly. And Allah knows better the truth about His laws.

Bahman 1383 A.H. (Solar) - Dhu al-Hijjah 1425 A.H.



چند نکته مهم درباره

## رؤیت هلال

آیه الله العظمی مکارم شیرازی